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Prevalence of Black Lung Continues to Increase among U.S. Coal Miners

NIOSH UPDATE:

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New Report Shows Increase Most Pronounced in central Appalachia

One in ten underground coal miners who have worked in mines for at least 25 years were identified as having black lung, according to a new report by the National Institute for Occupational Safety and Health (NIOSH) published in the [American Journal of Public Health](#). Coal miners in central Appalachia are disproportionately affected with as many as 1 in 5 having evidence of black lung—the highest level recorded in 25 years.

The data in this report come from NIOSH's [Coal Workers Health Surveillance Program \(CWHSP\)](#). NIOSH has operated the CWHSP and tracked the burden of black lung disease in underground coal miners since 1970. Through the Program, coal miners are offered periodic chest x-rays to detect early signs of black lung. For this study, NIOSH researchers looked at x-ray data collected by the CWHSP from working underground miners during 1970 to 2017.

This latest national estimate of 10 percent is higher than the previous NIOSH estimate last reported using [data from 2012](#), which found 7 percent of coal miners who worked more than 25 years in underground mines had evidence of black lung.

"Breathing coal mine dust is the sole cause of black lung, and it is entirely preventable," said David Blackley, DrPH, epidemiologist and one of the study's co-authors. "This study provides further evidence that effective dust control methods and protections to reduce coal mine dust exposure along with early detection of the disease are essential to protect miners' health."

A Steady Increase

By the late 1990s, the proportion of screened miners with black lung disease reached the lowest level on record. However, after that time, the trend reversed. Since 2000, the nationwide prevalence of black lung has increased. Recent NIOSH research indicates an unprecedented increase in progressive massive fibrosis (PMF), the most severe form of black lung disease, after the prevalence of PMF had fallen to 0.08% among all miners examined by NIOSH in the CWHSP in the late 1990s.

While this is the first published report of the prevalence of black lung in the central Appalachian region, [a 2016 report](#) showed an uptick in the number of cases of PMF among working coal miners in Kentucky, Virginia and West Virginia.

The current prevalence of severe black lung in this part of the country is as high as it's been (5%) since record-keeping began in the early 1970s. Black lung disease is completely preventable and would not occur without hazardous coal mine dust exposures.

NIOSH Commitment

NIOSH is committed to addressing the current black lung epidemic and continues to work with partners to more fully define the scope of the problem and make recommendations. In addition to improving [methods to control dust](#) generated by mining activities, NIOSH scientists have recently worked to improve [methods for detecting airborne coal mine dust](#) to provide immediate warnings when dust levels are too high.

NIOSH continues to provide [medical screening services](#) to underground and surface coal miners so that they are informed of their health status and can take steps to protect it. Additionally, through its mobile outreach efforts, NIOSH is bringing medical screening to areas hit hardest by the epidemic.

For more information on the [Coal Workers' Health Surveillance Program](#) and NIOSH's [Respiratory Health Division](#), please visit the NIOSH website.

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